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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/725,787	12/02/2003	Guang Lu	I-2-0467.1US	3819
24374	7590	09/15/2005	EXAMINER	
VOLPE AND KOENIG, P.C. DEPT. ICC UNITED PLAZA, SUITE 1600 30 SOUTH 17TH STREET PHILADELPHIA, PA 19103			EMDADI, KAMRAN	
			ART UNIT	PAPER NUMBER
			2667	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/725,787

Applicant(s)

LU, GUANG

Examiner

Kamran Emdadi

Art Unit

2667

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4-2-04(1 sheet).
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the code tree recited in claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 is rejected for containing indefinite subject matter, the phrases “determining a code set” and “assigning a code set to a timeslot sequence” are lacking antecedent basis because “a code set” is recited initially in the claim language and referred to subsequently as “assigning a code set”, thus it is indefinite whether they are the same code set in which case the subsequent occurrence of “a code set” should instead be amended to recite “the code set”.

In addition, the phrase “each successful assignment” is indefinite because the phrase implies more than one assignment made, however, only one code and one timeslot are mentioned in the claim language via “a code” and “a timeslot sequence.”

Further, the phrase “recording the physical resource allocation information” is indefinite. The phrase has no bearing on any of the subsequent method steps and the word “the” has no antecedent basis. Both the antecedent basis problem and an explanation of what “physical resource allocation information” is must be addressed in order to avoid further 112 2nd paragraph rejections. The Examiner suggests amending to include an explanation of what “physical resource allocation information” is, and/or how it is related to the other method steps.

Regarding claim 2, the phrase "measurement results" should be amended to recite "the measurement results" or the distinguished over the first occurrence of this term in claim 1. In addition, "a NODE B" is indefinite and should instead recite "another node."

Regarding claim 5, the phrase "the code vector" has no antecedent basis and should instead recite "a code vector."

Regarding claim 13, the phrase "the code tree" has no antecedent basis and should instead recite "a code tree."

The other subsequent dependent claims 3-4, 6-12 and 14 are also rejected under 35 U.S.C. 112, 2nd paragraph, by virtue of dependency on claim 1.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 15 is rejected under 35 U.S.C. 102(e) as being anticipated by Gustavsson et al. (U.S. Patent No. 6,721,568).

Gustavsson teaches a receiver 16 that includes measurement detection circuitry (see column 4, lines 30-35 and figure 1), and another node 15, that performs the similar

measurements as the first node device for taking wireless communication measurements (see figure 1), and a controller 12 that includes a memory 52, and radio resource manager 56 (see figure 3), where the controller 12 allocates resources based on measurements (see figures 1-2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sexton et al. (U.S. Patent Publication No. 2003/0081569) in view of Dent (U.S. Patent No. 5,579,306).

Regarding claim 1, Sexton teaches a call admission request sent from a mobile station to a base station (BTS), where in response to the request, time slots are allocated to a mobile station in a quantity comparable to the requirements of the mobile station (i.e. a figure of merit) (see abstract). A code is assigned to a timeslot sequence (see the turbo code and time slots allocated [0043]).

Sexton does not teach assigning a code to a timeslot based on a lowest interference level detected. Dent teaches a time and frequency slot allocation method that also accommodates mobile stations having varying power level requirements (see abstract). When a new mobile link is established an available time slot is assigned

based on a least amount of interference (see column 4, lines 32-44). Dent further teaches storing requirement information of the mobile station by organizing the mobile stations by group (see column 7, lines 47-55).

Motivation to combine these two references is evident from the intended purposes of the respective inventions. For instance, Sexton teaches the need for addressing individual mobile station's needs (e.g. location within the cell, bandwidth requirements) (see [0005, 0010]). Similarly, Dent teaches the need to address the power level requirements of individual mobile stations to ensure lower interference from maximum power transmissions (see column 1, lines 55-63). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined these two similar methods for ensuring individual mobile station quality in a cellular communication system, and arrive at the features recited in claim 1.

Regarding claim 3, the determining step is based upon a data rate or bandwidth requirement (see abstract).

Regarding claim 4, the figure of merit is the assignment quality of the timeslot, where the assignment quality is an associated data rate (see [0012]).

Regarding claim 14, the recording step includes storing subscriber information in a resource management memory (see [0030]).

Allowable Subject Matter

Claims 5-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, none of the prior art references cited to record taken individually or in combination teach selecting a code and a timeslot, and determining whether the code is available from a code vector of the selected timeslot, and evaluating whether the code can be supported in the selected timeslot, and recording the code allocation information, as recited in claim 5.

Regarding claims 6-12, these claims are also objected to for containing allowable subject matter by virtue of dependency on claim 5.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kamran Emdadi whose telephone number is 571-272-6047. The examiner can normally be reached on M-F between the hours of 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 571-272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kamran Emdadi

September 9, 2005


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2667 9/12/05